

Name _____

①

134080011_2

EE

Which number is equivalent to $\frac{3^4}{3^2}$?

- A 2
- B 9
- C 81
- D 729

④

134080404_4

EE

Determine the product.

$$800.5 \times (2 \times 10^6)$$

- A 1.7×10^7
- B 1.601×10^7
- C 1.7×10^9
- D 1.601×10^9

⑥

124080604_4

EE

At a given time, Saturn was 9.1×10^8 miles from the Sun and Earth was 9.3×10^7 miles from the Sun. By what distance is one planet closer to the Sun than the other planet?

- A 2×10^1
- B 2×10^{15}
- C 8.17×10^7
- D 8.17×10^8

⑦

134080405_3

EE

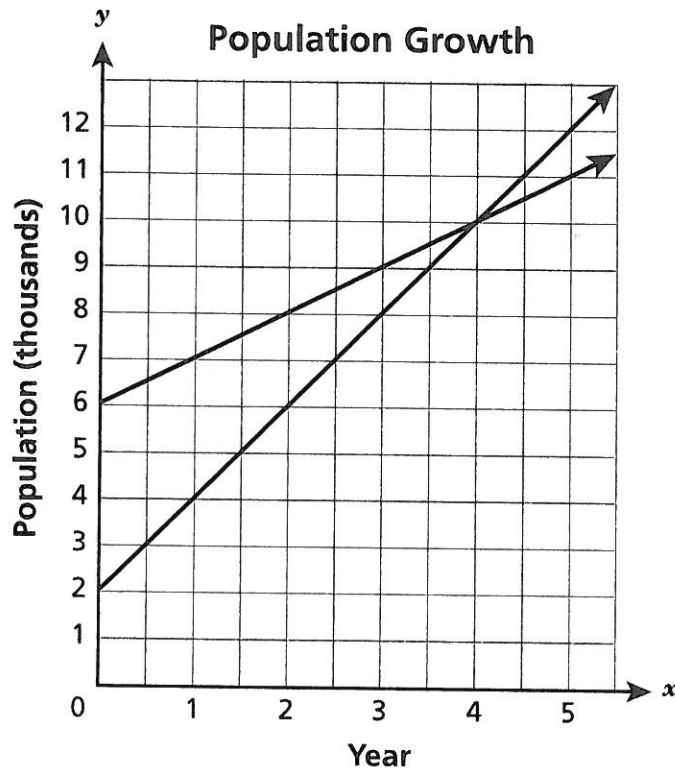
The combined volume of all the tanks at an aquarium is 1.25×10^6 gallons. The aquarium plans to install a new dolphin tank with a volume of 250,000 gallons. What will be the total volume of all of the tanks at the aquarium after the new dolphin tank is installed?

- A 1.5×10^5
- B 3.75×10^5
- C 1.5×10^6
- D 3.75×10^6

The population growth of two towns over a period of five years is represented by the system of equations below, both algebraically and graphically.

$$y = x + 6$$

$$y = 2x + 2$$



Which ordered pair is the solution to the system of equations?

- A (2, 6)
- B (4, 10)
- C (6, 2)
- D (10, 4)

Which expression is equivalent to $4^7 \times 4^{-5}$?

- A 4^{12}
- B 4^2
- C 4^{-2}
- D 4^{-35}

18

124080607_4

EE

What is the solution to the system of equations below?

$$\begin{cases} 3x + 4y = -2 \\ 2x - 4y = -8 \end{cases}$$

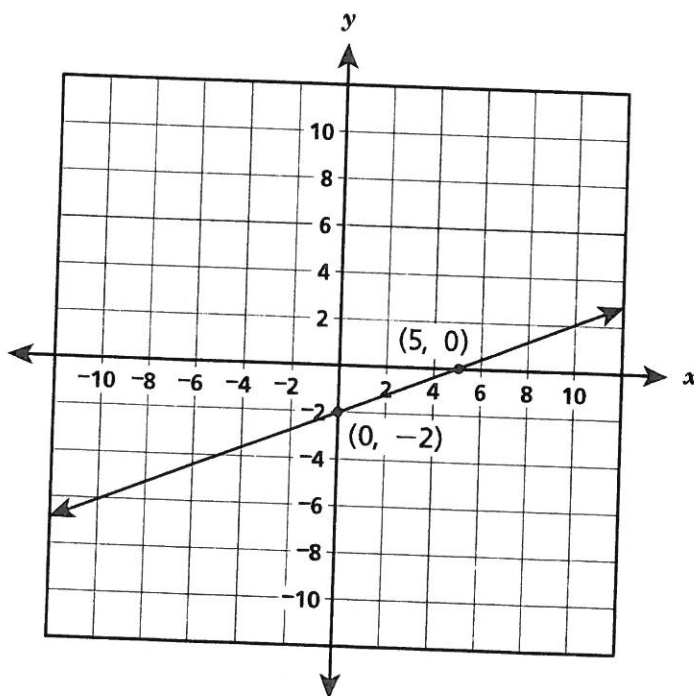
- A** $x = 2, y = -2$
B $x = 6, y = -5$
C $x = 4, y = 4$
D $x = -2, y = 1$

20

134080010_1

EE

Which equation represents the line shown on the coordinate grid below?



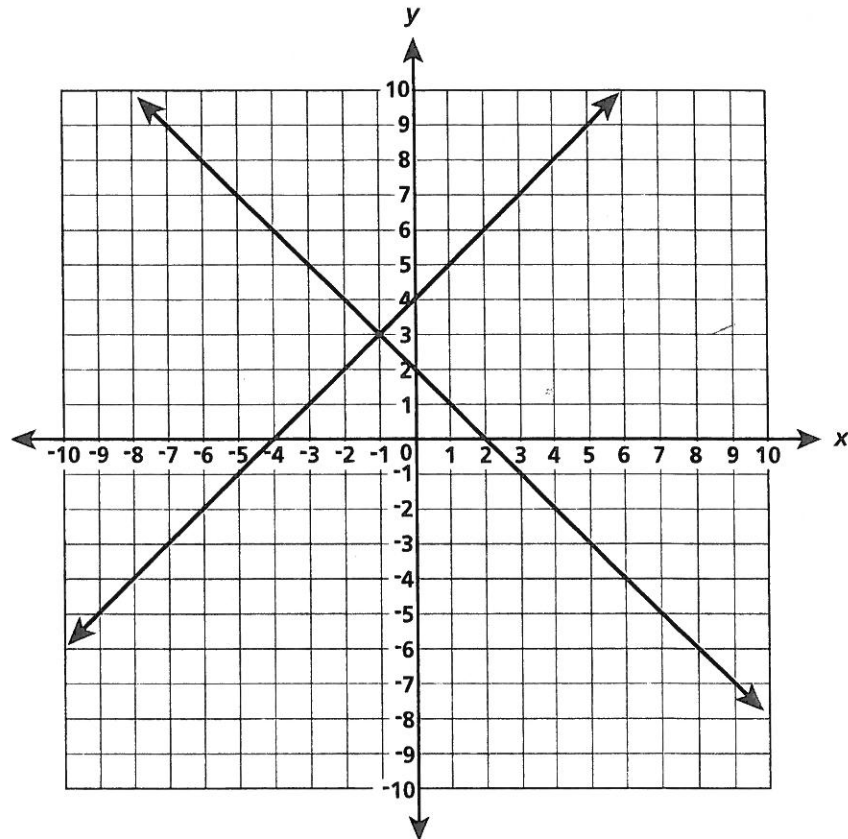
- A** $y = \frac{2}{5}x - 2$
B $y = \frac{2}{5}x + 5$
C $y = -\frac{2}{5}x - 2$
D $y = -\frac{2}{5}x + 5$

(3)

124080019_2

Lucy graphed a system of linear equations.

EE



What is the solution to the system of equations?

- A $(-4, 2)$
- B $(-1, 3)$
- C $(0, 2)$
- D $(2, 4)$

(32)

124080016_3

What is the solution to the equation below?

$$2(x - 3) = 2x + 5$$

- A $x = 2\frac{3}{4}$
- B $x = -2\frac{3}{4}$
- C There is no solution.
- D There are infinitely many solutions.

EE

(34)

124080005_4

Simplify:

$$\frac{4^8}{4^{-4}}$$

- A 4^{-32}
- B 4^{-2}
- C 4^4
- D 4^{12}

EE

(35)

124080601_1

Which expression is **not** equivalent to $\frac{6^3}{6^6}$?

- A $\frac{1}{6^2}$
- B 6^{-3}
- C $\frac{1}{216}$
- D $\frac{1}{6^3}$

EE

(36)

124080603_4

A lab has two bacteria cultures. Culture A contains 8×10^4 bacteria, and culture B contains 4×10^6 bacteria. How do the two cultures compare in size?

- A Culture A contains twice as many bacteria as culture B.
- B Culture A contains $\frac{1}{2}$ as many bacteria as culture B.
- C Culture A contains $\frac{1}{25}$ as many bacteria as culture B.
- D Culture A contains $\frac{1}{50}$ as many bacteria as culture B.

EE

(37)

124080011_2

Evaluate:

$$(2.4 \times 10^4)(4.5 \times 10^3)$$

- A 1.08×10^7
- B 1.08×10^8
- C 1.08×10^{12}
- D 1.08×10^{13}

EE

